
Novitates Gabonenses 43: Four New Species of *Dichapetalum* (Dichapetalaceae) from Gabon

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ABSTRACT. *Dichapetalum berendinae*, *D. findouense*, *D. inaequale*, and *D. mathisii* (Dichapetalaceae) are described as new from Gabon. All four species are illustrated, and their distributions are mapped. The necessary adaptations of the keys, for the Central African species as well as for the *Flore du Gabon*, are provided.

RÉSUMÉ. *Dichapetalum berendinae*, *D. findouense*, *D. inaequale* et *D. mathisii* (Dichapetalaceae) du Gabon sont décrits et illustrés. Les cartes de répartition des quatre espèces sont présentées. Les adaptations nécessaires pour la clé des espèces centrafricaines de *Dichapetalum* ainsi que pour celle de la *Flore du Gabon* sont ajoutées.

Key words: *Dichapetalum*, Dichapetalaceae, Gabon.

The Dichapetalaceae are, with 58 species in two genera, very well represented in Gabon (Breteler, 1991). The family is characterized by simple, alternate, stipulate leaves, by axillary, cymose inflorescences whose peduncle may be adnate to the petiole, and, usually, by bilobed petals. In a paper dealing with Gabon's evergreen forests and its floristic richness (Breteler, 1990), it was suggested that more species would be discovered in further exploration. This expectation was based on the large number of known species that had been collected only once or a very few times. Since then two species, *Dichapetalum rabiense* Breteler (Breteler, 1993) and *Tapura arachnoidea* Breteler (Breteler, 1995), have been described. Four more *Dichapetalum* species are added now. The first fruits of *Dichapetalum berendinae* and *D. mathisii* were collected during "l'Opération Radeau des Cimes" held in Gabon in 1999. Here, collecting from the tree canopies was carried out from a sledge carried by a dirigible.

Dichapetalum berendinae Breteler, sp. nov.

TYPE: Gabon. \pm 70 km E of Lastoursville, E of Ndambi, 28 Nov. 1993 (fl), F. J. & B. J. M. Breteler 12400 (holotype, WAG; isotypes, G, K, LBV, MA, MO, P, PRE, US). Figures 1, 5.

Dichapetalum heudelotii var. *heudelotii* affinis sed foliis majoribus crassioribusque, stipulis majoribus longe persistentibus, inflorescentiis longiramosis et fructibus plus minusve molliter cornutis differt.

Slender liana reaching the forest canopy or lianescent shrub. Branchlets brown-tomentellous, the same indumentum present on stipules, petioles, on the nervation of leaves beneath as well as on the inflorescence, \pm persistent. Stipules \pm persistent, narrowly triangular, (5–)8–12(–14) \times 2–3 mm. Leaves: petiole semiterete to \pm obtriangular in transverse section, usually grooved above, often laterally compressed, 3–6(–10) mm long; lamina firmly papery to (sub)coriaceous, bright green above, dull beneath, obovate-elliptic, rarely ovate, (1.5–)2(–2.5) times as long as wide, (12–)14–25(–46) \times (6–)7–13(–21) cm, usually obliquely cordate at base or rarely rounded, acuminate (to apiculate) at apex, the acumen 0.5–1.5 cm long, often reflexed, densely hairy, and distinctly glandular beneath; tomentellous both sides when young, soon glabrescent above except for the impressed midrib, the 10 to 16 pairs of secondary nerves usually soon glabrescent as well, beneath distinctly prominent reticulate nerves with a more persistent tomentellous indumentum especially so on the midrib and the secondary nerves; glands present on lower surface only, very distinct, convex, concentrated near leaf base and near apex as well as on the acumen, a few glands dispersed over the lower surface as well. Inflorescence many flowered, 3–4 times distinctly branched, usually distinctly pedunculate, peduncle (0–)1–3.5(–5.5) cm long, tomentellous; bracts and bracteoles concave, ovate-triangular, 2–3 mm long. Pedicel (1–)2–3 mm long, densely appressed-puberulous-tomentellous. Sepals firm, \pm erect to (partly) spreading, \pm free or shortly united at base, elliptic to ovate-triangular, 2.5–3.5 \times 1–1.5 mm, \pm acute at apex, outside hairy as pedicel, glabrous or appressed-puberulous on apical part inside. Petals erect or slightly curved inward, free at base, narrowly obovate in outline, 3–4 mm long, bilobed, glabrous except for a very few hairs below sinus outside; lobes 1.5 mm long, concave, \pm acute to

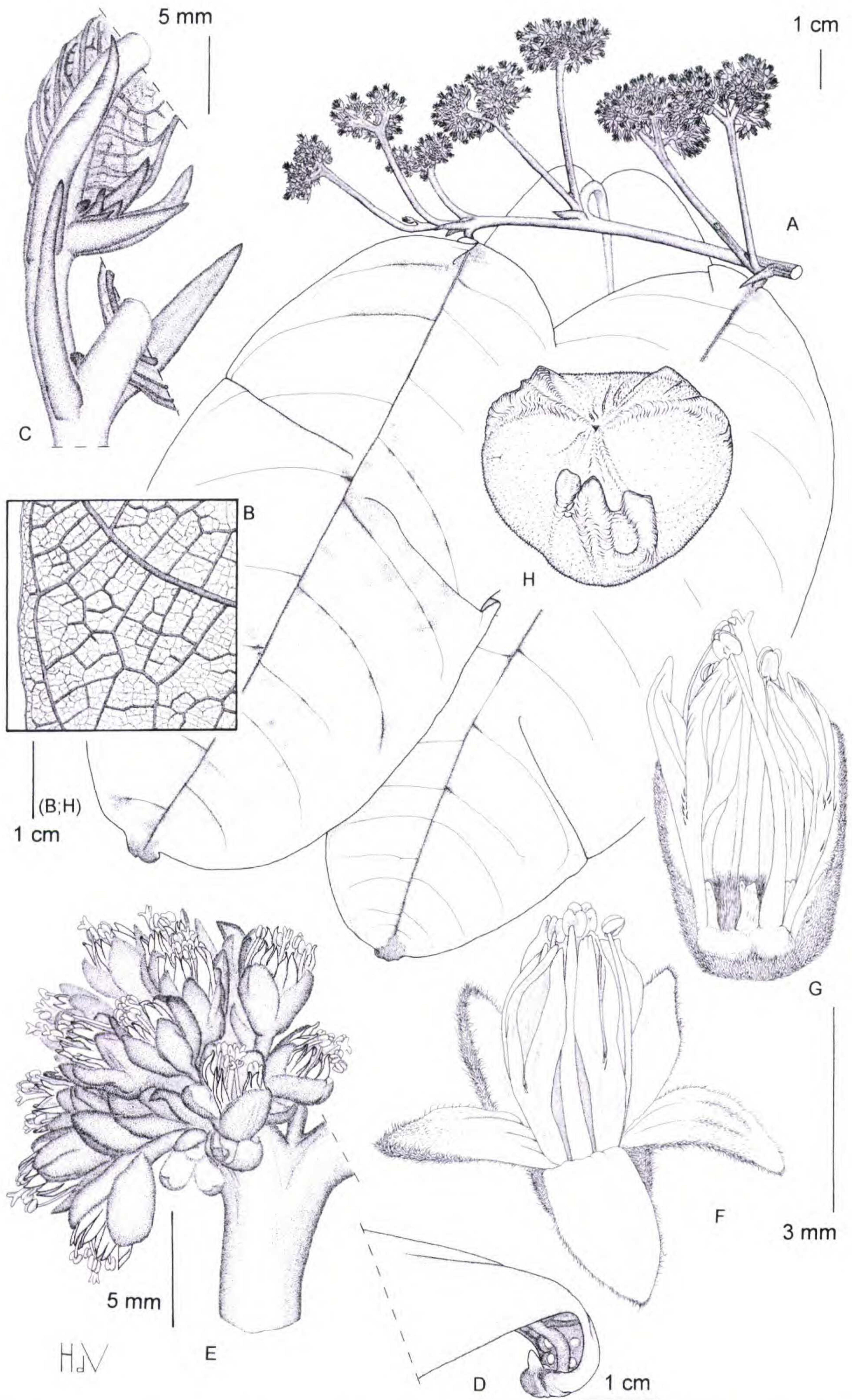


Figure 1. *Dichapetalum berendinae* Breteler. —A. Flowering branch. —B. Detail of leaf beneath. —C. Young branch with stipules. —D. Detail of leaf apex. —E. Part of inflorescence. —F. Flower. —G. Flower, two sepals, two petals, and one stamen removed. —H. Fruit (the horn-like blunt appendages are the carpels that did not develop a seed). A, B, E, after Breteler *c.s.* 12400; C, D, after Breteler *c.s.* 12299; F, G, after Breteler *c.s.* 12180; H, after Breteler *et al.* 14883.

rounded at apex. Stamens free, erect, slightly longer than petals, 3.5–5 mm long, glabrous; anthers 0.4–0.5 mm long. Staminodes subquadrate to obtriangular-oblong, up to 0.6×0.4 mm, apex bilobed to emarginate, glabrous or with a very few hairs inside. Pistil equal to or slightly longer than stamens; ovary 3-locular, depressed globose, 0.5–1 mm long, velutinous; style glabrous, 3–4 mm long, shortly 3-lobed apically. Fruit yellowish at maturity, densely velutinous, from subglobose and 2 cm diam. in 1-seeded fruits to depressed-globose and slightly 3-lobed to 3-angled and 2×3 cm in 3-seeded ones; carpels distinctly nerved on dorsal side; mesocarp 3–4 mm thick, juicy, \pm fibrous; endocarp consisting of a palisade-like layer 1–1.5 mm thick. Seed subellipsoid, ca. $12\text{--}14 \times 10$ mm; seed coat rather firm, ca. 0.2 mm thick, brown, smooth, glabrous.

Etymology. This species is named in honor of Berendina J. M. Breteler-Klein Breteler, wife of the author and co-collector of the type specimen.

Phenology. Flowering from November to March; fruiting in February.

Distribution and habitat. *Dichapetalum berendinae* is a tropical lowland rain forest species from central and southeastern Gabon; altitudes up to ca. 600 m.

Paratypes. GABON. 30 km E of Lastoursville, *F. J. & B. J. M. Breteler 12180* (WAG); 40 km E of Lastoursville, *F. J. & B. J. M. Breteler 12299* (WAG), *12352* (WAG); 5–10 km W of Boungou-Madouma Railway Station, *F. J. & B. J. M. Breteler 12500* (LBV, MO, WAG); 40 km E of Lastoursville, *F. J. & B. J. M. Breteler 12577* (LBV, MO, P, WAG); near Sébé R., E of Lastoursville, *F. J. & B. J. M. Breteler 12639* (LBV, MO, WAG); Makandé, 65 km SSW of Booué, *Breteler et al. 14883* (LBV, WAG), *15238* (LBV, WAG), *15269* (LBV, MO, P, WAG); W of Offoué R., \pm 85 km SSW of Booué, *Breteler 15807* (WAG); Forêt des Abeilles, E of Lopé Reserve, *McPherson 16238* (LBV, WAG); Makandé, 65 km SSW of Booué, *Wieringa et al. 4110* (WAG).

Note. The sterile specimens *Breteler 6304*, *6399*, *6438*, and *6606*, cited as *Dichapetalum heudelotii* (Planchon ex Oliver) Baillon by me in 1979, most probably belong here, too.

For identification see under *Dichapetalum inaequale*.

***Dichapetalum findouense* Breteler, sp. nov.**

TYPE: Gabon. Ndogo Lagoon, Findou I., 14 Nov. 1993 (fl, fr), *R. Hagens & F. J. Breteler 67* (holotype, WAG; isotypes, K, LBV, MO, P). Figures 2, 5.

Dichapetalum cymuloso similis pilositate ramunculorum foliorumque, floribus atri-exsiccatis et fructibus glabris, sed differt floribus multum parvioribus, staminibus bre-

vioribus quam petalis (in *D. cymuloso* longioribus) et fructibus longi-acuminatis.

Lianescent shrub or liana with hollow orthotropic shoots, the plagiotropic ones hollow or not; branchlets \pm strigose, \pm glabrous when older, with brown bark with a few lenticels. Stipules \pm appressed, narrowly triangular, 1–3.5 mm long, hairy as branchlet, caducous. Leaves: petiole 1–4 mm long, terete to semiterete, hairy as branchlet, especially on upper side; lamina papery, elliptic to obovate-elliptic, (2–)2.5–3(–3.5) times as long as wide, (5–)8–12 \times (2–)3–4.5 cm, rounded to obtuse at base, acuminate at apex, the acumen up to 1 cm long, rounded at top, midrib and the 5 to 7 pairs of main lateral nerves as well as the tertiary venation prominent on both sides, more distinctly so beneath, strigose on margin and on midrib on both sides, to a lesser extent on the main lateral veins beneath, the latter glabrous or with a very few hairs above in very young leaves, the indumentum most persistent on midrib, especially above; glands small, scattered, below only or if on both sides then more numerous below. Inflorescence up to 9-flowered, appressed-puberulous; peduncle 1–4 mm long; bracts and bracteoles narrowly ovate to triangular, up to 1 mm long. Pedicel 0.5–3 mm long, the upper part 0.5 mm long, appressed-puberulous. Sepals erect or nearly so, ovate-oblong, $1.5 \times 0.5\text{--}0.8$ mm, appressed-puberulous outside and mainly so on upper part inside. Petals suberect, \pm free from filaments, narrowly obovate to elliptic in outline, 1.5–2 mm long, 0.2–0.3 mm bilobed, glabrous; lobes concave, rounded at apex. Stamens \pm as long as sepals, shorter than petals, ca. 1.5 mm long, glabrous; anthers 0.3 mm long. Staminodes subquadrate in outline, ca. 0.3×0.3 mm, apex bilobed or not, glabrous. Pistil shorter to slightly longer than stamens, 1–1.5 mm long; ovary 2- or 3-locular, shortly velutinous; style glabrous, 2- or 3-lobed apically. Fruit \pm yellow, ellipsoid, long-beaked, 4.5–6 cm long (beak inclusive), up to ca. 2.5 cm diam. in 1-seeded fruit, glabrous; beak 1.5–2 cm long; exocarp and juicy mesocarp together up to 3 mm thick; endocarp \pm papery, fibrous, mucate outside, smooth and glabrous inside; seed ovoid, slightly laterally compressed, 2.8×1.8 cm, with a thin, brown, smooth seed coat.

Etymology. This species was first collected on the island Findou in the Ndogo Lagoon, hence its geographic epithet of findouense.

Distribution and habitat. *Dichapetalum findouense* is known only from two localities in Gabon, both in the rain forest at 0–100 m altitudes.

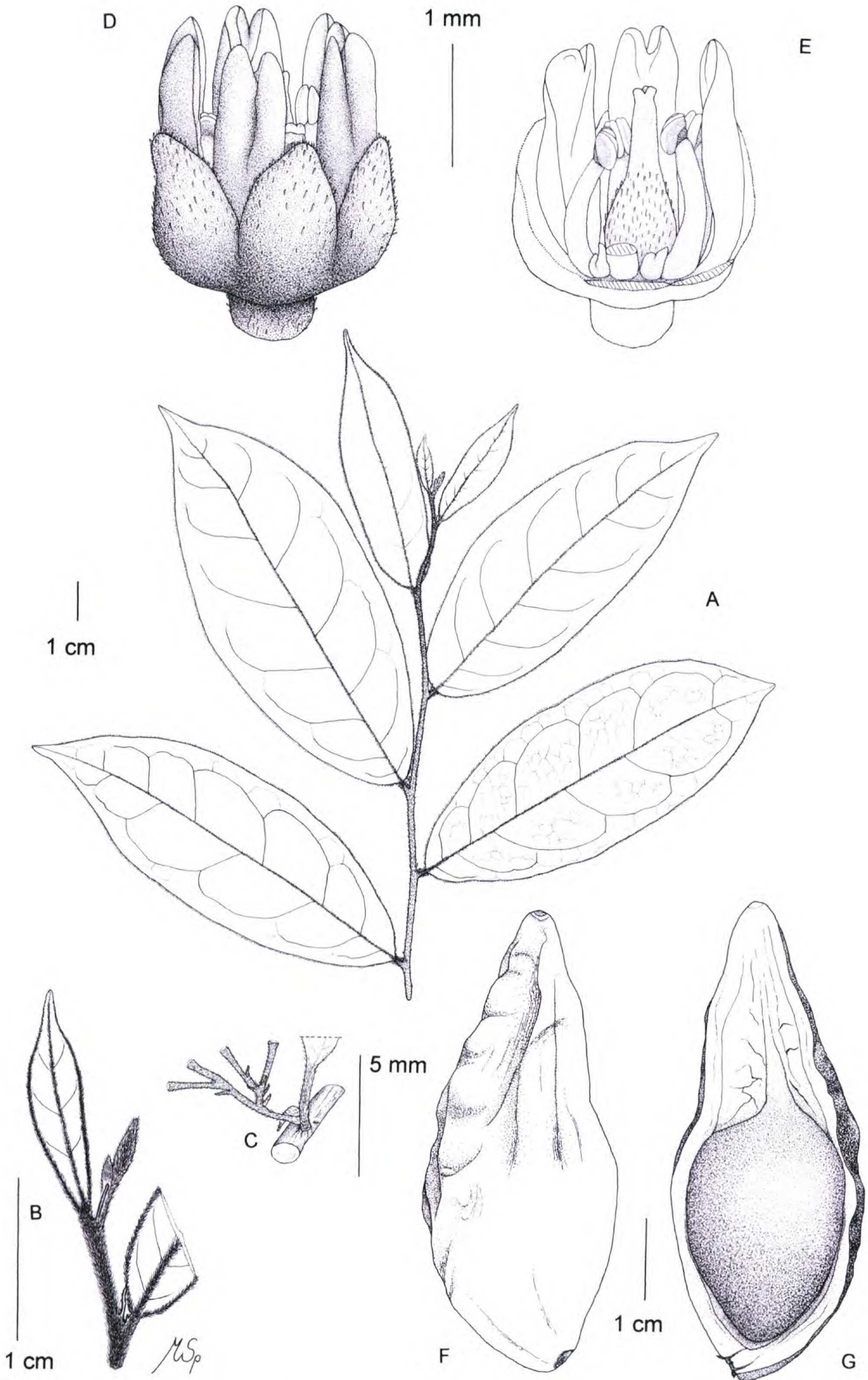


Figure 2. *Dichapetalum findouense* Breteler. —A. Leafy branch. —B. Young shoot with stipules. —C. Inflorescence branches. —D. Flower. —E. Flower, two sepals, two petals, and one stamen (partly) removed. —F. Fruit. —G. Fruit in longitudinal section showing the apiculate endocarp. A–C, F, G, after Hagens & Breteler 67; D, E, after J. J. de Wilde et al. 11500.

Paratype. GABON. Near Ndjolé, *J. J. de Wilde et al.* 11500 (K, LBV, MA, MO, P, WAG).

With respect to Key II: Central African Species (Breteler, 1986: 22–28), *Dichapetalum findouense* will key out at two different couplets because it has either a 2- or a 3-carpellate gynoecium. When, at couplet 43, a 2-carpellate gynoecium is chosen it will lead to couplet 47, where 47a is the best choice because of the glabrous fruits. A new wording of 47a and the insertion of a new couplet 47* will accommodate *D. findouense*:

- 47a Branchlets glabrous to sparsely puberulous or strigose; inflorescence a sessile or very shortly peduncled, up to 9-flowered cymule; fruits glabrous 47*
- 47*a Branchlets glabrous to sparsely puberulous; petiole 2–6(–10) mm long, the lamina with glabrous margin; petals, stamens, and pistil subequal in length; Cameroun, Gabon
. *D. minutiflorum*
- 47*b Branchlets ± strigose; petiole 1–4 mm long, the lamina with strigose margin; petals, stamens, and pistil unequal in length; Gabon
. *D. findouense*

The choice for a 3-carpellate gynoecium leads to couplet 60 in Key II (Breteler, 1986: 27), where *Dichapetalum bodyi* and *D. cymulosum* are separated. The following modifications are proposed:

- 60a Leaves drying greenish to pale-brown, (8–)11–15(–18) × 3.5–6(–9) cm, midrib glabrous above or nearly so; Gabon, Congo, western Zaire *D. bodyi*
- 60b Leaves drying dark brown to black, (3–)8–12(–15) × (1–)3–4(–5)cm, midrib always distinctly hairy above 60*
- 60*a Sepals reflexed, 2–2.5 × 1.5 mm; petals erect-spreading 2.5–3(–3.5) mm long, 1–1.5 mm bilobed; stamens distinctly longer than petals, 3–4(–4.5) mm long; SE Cameroun . . . *D. cymulosum*
- 60*b Sepals suberect, 1.5 × 0.5–0.8 mm; petals erect, 1.5–2 mm long, 0.2–0.3 mm bilobed; stamens distinctly shorter than petals, ± 1.5 mm long; Gabon *D. findouense*

For the *Flore du Gabon* (Breteler, 1991: 30–35) the key to the species has to be changed as follows for the 2-carpellate gynoecium:

42. Jeunes rameaux glabres à pubérence éparsée et très tôt glabrescents ou jeunes rameaux ± strigose; inflorescence en cymule sessile ou courtement pédonculé, jusqu'à 9-flore, fruits glabres.
- 42 bis. Jeunes rameaux glabres à pubérence éparsée et très tôt glabrescents; pétiole 2–6(–10) mm de long, limbe à marge glabre; pétales, étamines et pistil de même longueur environ
. *D. minutiflorum*
- 42 bis*. Jeunes rameaux ± strigose; pétiole 1–4 mm de long, limbe à marge stri-

gose; pétales, étamines et pistil de longueur différente *D. findouense*

For the 3-carpellate gynoecium in the *Flore du Gabon* the following should be applied:

- 53*. Feuilles différentes; si fruits lobés, alors plusieurs graines.
- 53 bis. Pétales longs de 3,5–4,5 mm, 1–2 mm bilobés; étamines plus longues que les pétales, longues de 4–5 mm *D. bodyi*
- 53 bis*. Pétales longs de 1,5–2 mm, 0,2–0,3 mm bilobés; étamines plus courtes que les pétales, longues de ± 1,5 mm *D. findouense*

***Dichapetalum inaequale* Breteler, sp. nov.**

TYPE: Gabon. Bambidie, ± 30 km E of Lastoursville, 7 Oct. 1997 (fl), *F. J. Breteler & M. Leal 14251* (holotype, WAG; isotypes, G, K, LBV, MA, MO, P, PRE, US). Figures 3, 5.

Dichapetalum crassifolium similis ramis brunneis lenticellatis, foliis coriaceis fere glabris et forma inflorescentiae, sed differt absentia exsudati in ramis, staminibus petalis coalitis et lobis petalorum distinctis.

Medium-sized liana. Branches brown, lenticellate, glabrous or glabrescent. Branchlets (sub)appressed-puberulous, glabrescent with age. Stipules ± appressed, narrowly ovate-triangular, 2–5 mm long, appressed-puberulous both sides, caducous. Leaves: petiole subterete, grooved above, (2–)4–5(–8) mm long, appressed-puberulous; lamina coriaceous, elliptic to obovate, rarely ovate, usually obliquely so, 2–3 times as long as wide, (5–)9–13(–14) × (2.5–)4–5(–6) cm, rounded to cuneate and usually unequal-sided at base, acuminate at apex, the acumen ± acute to rounded, 0.5–1(–1.5) cm long; sparsely appressed-pubescent on both sides when young, soon glabrescent, especially so above, midrib impressed above, prominent beneath, the 5 or 6(to 7) pairs of main lateral nerves ± plane and rather indistinct above, plane to slightly prominent and ± distinct beneath; glands distinct, beneath only, a few large glands on leaf base and some smaller ones scattered on the surface. Inflorescence ± small, up to 12-flowered, once distinctly branched, appressed-puberulous; peduncle 2–7(–12) mm long; bracts and bracteoles narrowly triangular, up to 1.5 mm long, appressed-puberulous. Pedicel (sub)appressed-puberulous, 2–5 mm long, the upper part up to 1 mm long. Sepals erect to spreading to partly (sub)reflexed, ± free, elliptic-oblong, 3.5–4 × 1.5–2.5 mm, acute to rounded at apex, appressed-puberulous to tomentellous outside, more sparsely so inside. Petals pale-green with yellow lobes, erect, very shortly adnate to fil-

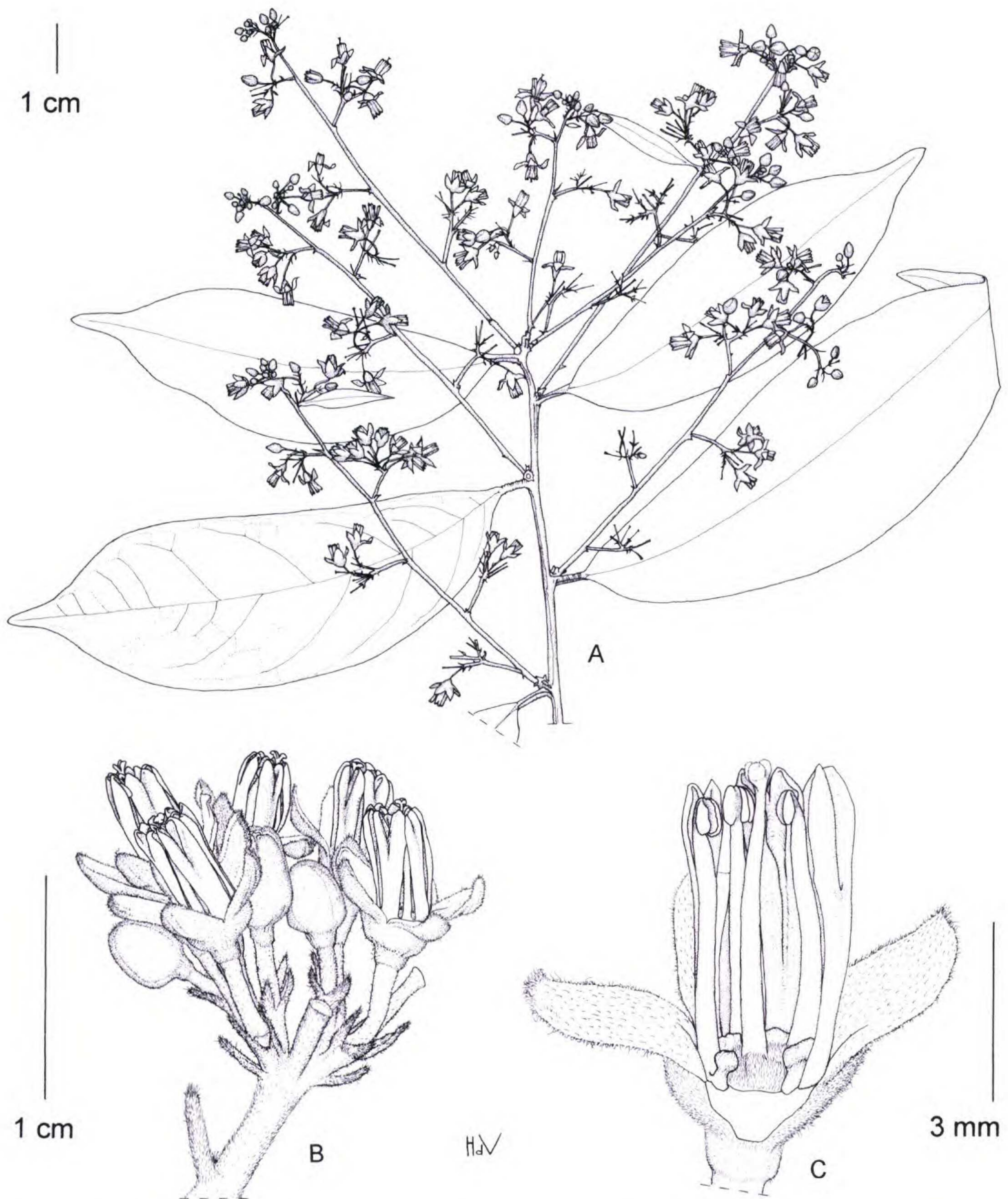


Figure 3. *Dichapetalum inaequale* Breteler. —A. Flowering branch. —B. Part of inflorescence. —C. Flower, two sepals, one petal, and two stamens removed. All after Breteler & Leal 14251.

aments at base, narrowly spatulate in outline, 5–6 mm long, ca. 0.5 mm bilobed, glabrous, the lobes concave. Stamens erect, slightly shorter than petals, 5–5.5 mm long, glabrous; anthers \pm 0.5 mm long. Staminodes subquadrate, 0.5–0.7 mm long and wide, glabrous. Pistil 6–6.5 mm long; style glabrous, shortly 3-lobed at apex; ovary depressed, \pm

obscurely 3-lobed, ca. 0.5 mm long, densely \pm white-velutinous. Fruits unknown.

Etymology. The epithet “*inaequale*” is derived from the characteristic asymmetrical leaves of the new species.

Distribution and habitat. Only twice collect-

ed from Gabon in the tropical rain forest at Bambi-
bidie, 30 km E of Lastoursville, at an altitude of
ca. 300 m.

Paratype. GABON. Bambi-
bidie, 30 km E of Lastours-
ville, *Breteler & Leal 14155* (G, K, LBV, MA, MO, P,
WAG).

For Key II: Central African Species (Breteler,
1986: 22–28) the new species *Dichapetalum ber-*
endinae will key out at the first choice in couplet
68 together with *D. dewildei* Breteler. The new spe-
cies *D. inaequale*, of which the fruits are unknown,
will also key out here if hairy fruits are assumed,
which is the most likely. To accommodate both new
species it is proposed to change couplet lead 68a
as follows and to insert the couplets 68* and 68**
between 68 and 69.

- 68a Petal lobes distinct, concave, not incurved to
inflexed 68*
- 68*a Branchlets with (long) persistent, brown-to-
mentellous indumentum; stipules (5–)8–12(–
14) mm long, ± (long) persistent; leaves
(12–)14–25(–46) × (6–)7–13(–21) cm, with
10 to 16 pairs of secondary nerves; Gabon
. *D. berendinae*
- 68*b Branchlets glabrous or glabrescent; stipules
2–5 mm long, caducous; leaves (5–)8–13(–
18) × (2.5–)4–7(–10) cm with 4 to 7 pairs of
secondary nerves 68**
- 68**a Leaves drying dark-brown to black, 1.5–2
times as long as wide, ± symmetrical, gla-
brous or only with appressed-puberulous mid-
rib and secondary nerves; petals 3–4.5 mm
long, bilobed for 0.5–1.5 mm; Cameroun,
eastern Zaire *D. dewildei*
- 68**b Leaves drying pale-green, 2.5–3 times as long
as wide, usually asymmetrical, hairy on entire
surface when young; petals 5–6 mm long, bi-
lobed for 0.5 mm; Gabon *D. inaequale*

In the *Flore du Gabon* (Breteler, 1991: 30–35)
Dichapetalum berendinae will key out at the end
with *D. dewildei*, as will *D. inaequale* when it is
assumed that its fruits will be hairy. Lead 60*
should be changed as follows:

- 60*. Style glabre dans sa partie inférieure ou seu-
lement avec des poils très rares; sépales longs
de 2,5–4,5 mm 61

The separation of these three species can be sim-
ilarly done for the key to the Central African Spe-
cies (Breteler, 1986: 22–28), by extending the key
in this flora with two additional couplets, 61 and
62.

61. Branches avec un indumentum brun-tomentel-
leux, persistant; stipules (5–)8–12(–14) mm de
long, ± persistants; feuilles (12–)14–25(–46) ×
(6–)7–13(–21) cm, avec 10–16 paires de ner-
vures laterales *D. berendinae*
- 61*. Branches glabres ou glabrescentes; stipules 2–

5 mm de long, caduques; feuilles (5–)8–13(–
18) × (2,5–)4–7(–10) cm, avec 4–7 paires de
nervures latérales.

62. Feuilles brun-foncés à noir à sec, 1,5–2
fois plus longue que large, ± symé-
triques, glabres ou seulement pubescent
sur les nervures principales; pétales 3,5–
4 mm de long, 0,5–1,5 mm bilobés
. *D. dewildei*
- 62*. Feuilles vert-clairs à sec, 2,5–3 fois plus
longue que large, le plus souvent asymé-
triques, à pubescence sur toute la surface
chez les jeunes feuilles; pétales 5–6 mm
de long, 0,5 mm bilobés *D. inaequale*

Dichapetalum mathisii Breteler, sp. nov. TYPE:
Gabon. Makandé, ca. 65 km SSW of Booué,
26 Jan. 1999 (fr), *F. J. Breteler, G. Caballé, I.*
Issembé, Y. Moussavou, O. Pascal & L. Pyot
14787 (holotype, WAG; isotypes, K, LBV, MO,
P). Figures 4, 5.

Dichapetalum angolense similis ramis cavis et inflores-
centia magna, sed differt indumento ramunculi, folii inflo-
rescentiaeque brevi monotypico, stipulis indivisis inter-
dum dentatis et fructu lobato.

Liana up to at least 50 m long and 12 cm diam.
or lianescent shrub. Branches gray-tomentellous,
hollow. Branchlets hollow, brown-tomentellous, the
same indumentum present on stipules, petioles, in-
florescences and usually on the main nerves of the
leaves, more rarely on the entire lower surface.
Stipules narrowly ovate-triangular, 4–9(–11) mm
long, margin entire, at most (sub)dentate, caducous.
Leaves: petiole ± semiterete to subterete, ridged
above or not, (6–)7–12(–19) mm long; lamina firmly
papery to coriaceous, obovate, sometimes elliptic,
more rarely ovate-suborbicular, (1–)1.5–2(–2.5)
times as long as wide, (10–)12–25(–35) × (5–)8–
13(–21) cm, usually obtuse to cordate, more rarely
rounded, and often unequal-sided at base, retuse
or emarginate to obtuse at apex with a mucronate-
like tip of at most 5 mm long; midrib impressed
above, prominent beneath, the (7)8 to 10(12) pairs
of secondary nerves plane to slightly impressed
above, prominent beneath, the tertiary nervation
prominent beneath, ± indistinct above; glands
small, present on both sides, ± well dispersed. In-
florescence many-flowered, distinctly 4 to 6 times
branched, sometimes branched in the axil, i.e., at
the very base, sometimes arranged on shoots with
very strongly reduced leaves only; peduncle up to
1 cm long; bracts and bracteoles narrowly ovate-
triangular (0.5–)1–5 mm long. Pedicel up to 10 mm
long, the upper part 1–2.5 mm long, hairy as calyx.
Sepals reflexed, shortly united at base, oblong-el-
liptic, 2–3 × 1–1.5 mm, top ± acute, tomentellous
outside, glabrous or appressed-puberulous on up-

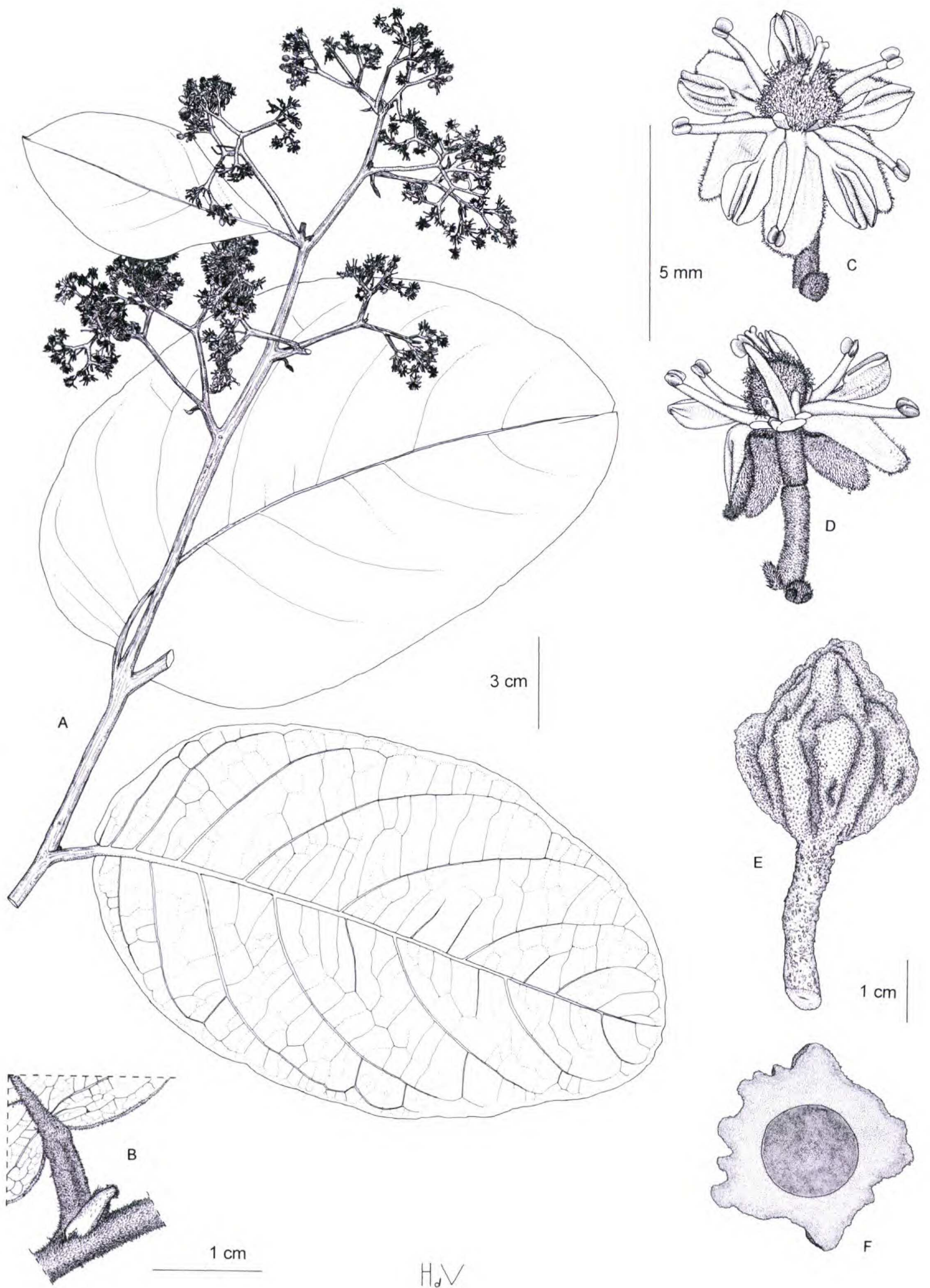


Figure 4. *Dichapetalum mathisii* Breteler. —A. Flowering branch. —B. Leaf axil with stipule. —C. Flower. —D. Flower, one sepal and two petals removed —E. Fruit. —F. Fruit in transverse section. A after *Reitsma c.s. 2662*; B, E, F, after *Breteler et al. 14787*; C, D, after *Breteler & Jongkind 10490*.

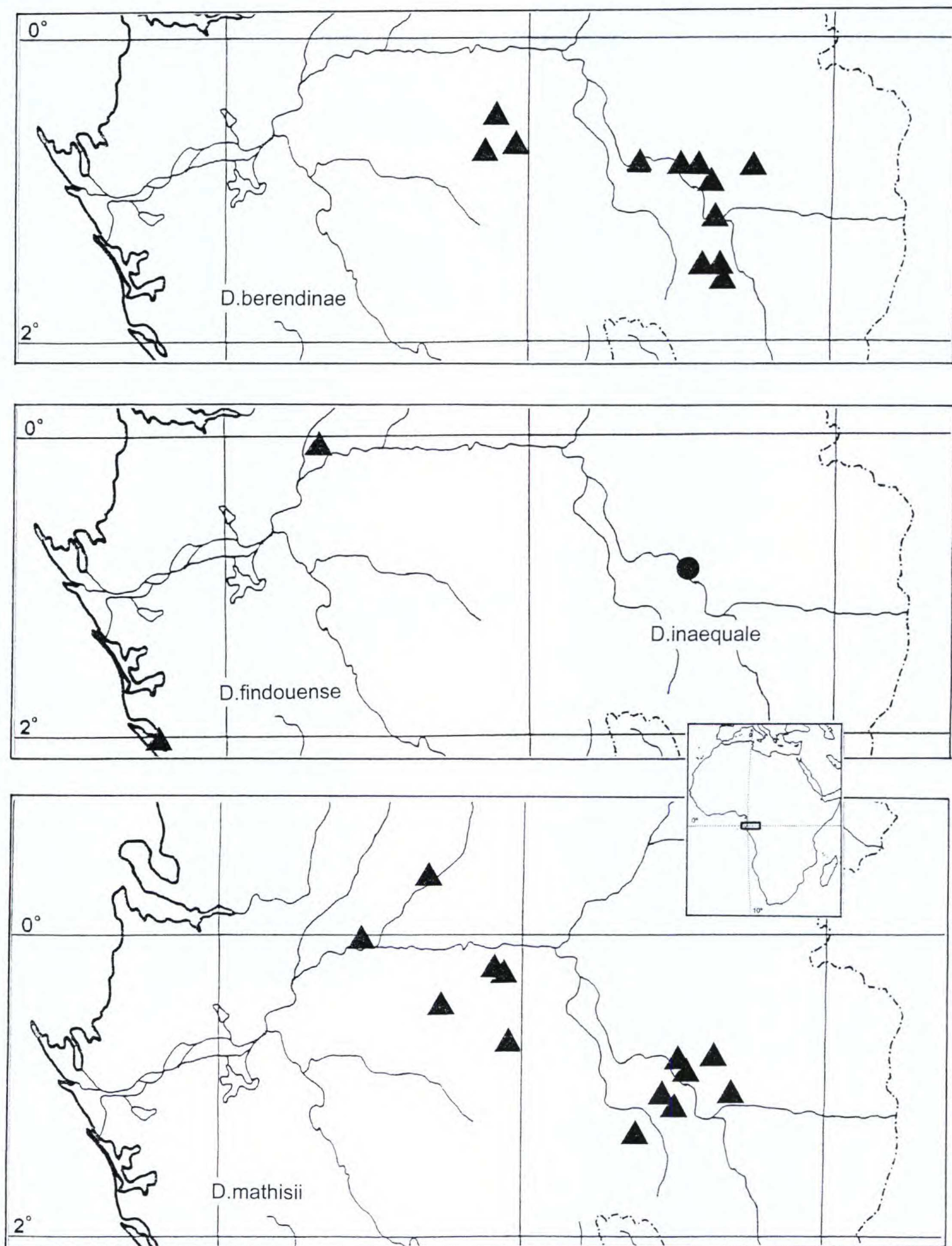


Figure 5. Distribution of the four new *Dichapetalum* species.

per part inside. Petals white, suberect to reflexed, obovate in outline, 2.5 mm long, 1.5 mm bilobed, lobes concave, glabrous except for a few hairs below lobes outside. Stamens white, spreading, slight-

ly longer than petals, shortly adnate to calyx at base, 2.5–3.5 mm long, glabrous; anthers ca. 0.4 mm long. Staminodes oblong to obtriangular, up to ca. 0.8 mm long, sometimes slightly bilobed, gla-

brous or with a few hairs on apex. Pistil (2)3-carpellate (see note), 2–2.5 mm long; ovary and basal part of style with cotton-wool-like indumentum; style (2)3-lobed apically. Fruits globose-ellipsoid in outline, irregularly longitudinally ridged, 2.5–3.5 cm long, up to 3.5 cm diam., densely velutinous; exocarp together with firm mesocarp 8–10 mm thick, endocarp \pm 0.5 mm thick, rather weak. Seed subellipsoid, (13–)15–20 \times 10–15 mm, with a very thin, glabrous seed coat.

Etymology. This species is named after the recently born son Mathis (1999), whose father Laurent Pyot made a great effort on the sledge carried by a dirigible to collect the specimen that later became the type.

Phenology. Flowering from September to December; fruiting in January.

Distribution and habitat. *Dichapetalum mathisii* is a new species from the rain forest of central and southeastern Gabon, from altitudes up to ca. 600 m.

Paratypes. GABON. 10 km NE of La Lara, *Breteler & de Wilde 415* (WAG); km 48 Lastoursville–Moanda Rd., *Breteler 6447* (LBV, MO, WAG); 5–15 km NNW of Ndjolé, 11 Nov. 1991 (st), *Breteler & Jongkind 10371* (LBV, WAG), 10490 (LBV, WAG); 55 km E of Lastoursville, *F. J. & B. J. M. Breteler 12266* (WAG); 33 km Kessipoughou–Lifouta Gare Rd., *F. J. & B. J. M. Breteler 12328* (WAG); 20 km NW of Olounga, *Breteler 15676* (WAG); Lastoursville, *Le Testu 7652* (K, P, WAG), *Le Testu 7745* (P, WAG); 30–40 km SE of Achouka, *Louis, Breteler & de Bruyn 709* (BR, LBV, MO, WAG); 50 km SE of Achouka, *Louis, Breteler & de Bruyn 762* (BR, LBV, MA, MO, P, PRE, WAG); Lopé Reserve, *J. M. & B. Reitsma 2662* (LBV, WAG); 21 km SE of Lastoursville, *van der Maesen, Louis & de Bruyn 5886* (LBV, WAG).

Notes. One sterile specimen (*Breteler 6447*) and two flowering specimens (*Le Testu 7652* & *7745*) now identified as *Dichapetalum mathisii* have formerly been cited under *D. angolense* Chodat (*Breteler, 1973: 59*). They were at that time already recognized as somewhat aberrant, but the lack of sufficient evidence prevented their separation. The collection of full-grown fruits together with 10 other specimens collected since 1973 makes it now possible to distinguish *D. mathisii* quite satisfactorily as follows:

At least some indumentum on vegetative parts and inflorescences, consisting of dense short hairs and more sparsely scattered long hairs; stipules pinnatilobed to pinnatisect; fruits not ridged *D. angolense*
Indumentum on vegetative parts and inflorescences uniformly tomentellous; stipules entire, at most (sub)dentate; fruits distinctly ridged *D. mathisii*

In *Breteler & Jongkind 10490* some flowers with

2-carpellate pistils have been observed, but they clearly are a small minority and, moreover, have been found in this collection only. It may, however, indicate a relationship between *Dichapetalum mathisii* and the closely related *D. angolense* and *D. bocageanum* (Henriques) Engler. The close relationship between the latter two species has been discussed earlier (*Breteler, 1973: 60*).

The segregation as *Dichapetalum mathisii* from formerly *D. angolense* makes it necessary to change Key II: Central African Species (*Breteler, 1986: 22–28*) at couplet 9 as follows:

- 9a Stipules pinnatilobed to pinnatisect, usually \pm long persistent 10
9b Stipules entire, at most (sub)dentate, or stipules early caducous 11

Dichapetalum mathisii will now come out under 9b and will key out at 20a together with *D. beilschmiedioides* Breteler (*Breteler, 1973: 87*). The insertion of couplet 20* in the key will separate these two species:

- 20a Petiole (5–)7–12(–19) mm long; branches usually hollow; Gabon 20*
20b Petiole (1–)2–5(–10) mm long; branches solid 21
20*a Branches and branchlets glabrous or glabrescent; leaves glabrous or nearly so
. *D. beilschmiedioides*
20*b Branches and branchlets densely tomentellous; leaves tomentellous at least on petiole and part of midrib *D. mathisii*

For the *Flore du Gabon* (*Breteler, 1991: 30–35*) similar changes have to be made at couplet 9:

9. Stipules pinnatilobées à pinnatiséquées, \pm long persistantes *D. angolense*
9*. Stipules entières ou au plus dentées, ou stipules tôt caduques.

Then *Dichapetalum mathisii* will key out at couplet 18 together with *D. beilschmiedioides* (*Breteler, 1973: 87*). A small change of couplet 18 and the insertion of couplet 18a as follows will separate the two species:

18. Petiole long de (5–)7–12(–19) mm; rameaux le plus souvent creux.
18a. Rameaux glabres ou glabrescents; feuilles glabres ou presque
. *D. beilschmiedioides*
18a*. Rameaux densément tomenteux; feuilles au moins tomenteuses sur le pétiole et une part de la nervure médiane
. *D. mathisii*

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